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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,577	05/20/2004	Masayuki Kobayashi	2018-881	6335

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EXAMINER

PHAN, THIEM D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

<b>Office Action Summary</b>	<b>Application No.</b> 10/849,577	<b>Applicant(s)</b> KOBAYASHI ET AL.	
	<b>Examiner</b> Tim Phan	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-9 & 12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/20/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicants' election of Group I, Claims 1-9 and 12, filed on 7/05/05 is acknowledged.

The Restriction mailed on 6/09/05 has been carefully reviewed and is held to be proper. Applicants did not distinctly and specifically point out any logical error in the Restriction Requirement. Moreover, due to the lack of traversal on the merits, Applicants' election of Group I, claims 1-9 and 12, has been treated as an election without traverse.

Accordingly, Claims 10 and 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable generic or linking claim.

The Restriction filed on 6/09/05 is hereby **made Final**.

Applicants are required to cancel the nonelected claim (10 & 11) or take other appropriate action.

An Office Action on the merits of Claims 1-9 and 12 now follows.

*Claim Objections*

2. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants are required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. Claim 12 is a method claim but dependent on a product claim.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ziegler et al (5,932,949).

As applied to claims 1 and 6, Ziegler et al teach a process of manufacturing a carbon-segment commutator, comprising:

- a step of forming a first unitary material (Fig. 4, 70) having nail portions (Fig. 4, 42) for the plurality of metal terminals, said first unitary material being flat with the nails extending radially outward;

- a step of forming a second unitary material (Fig. 6, 20; col. 9, line 20) for the commutator segments;
- a step of fixing the first unitary material (Fig. 6, 70) and the second unitary material (Fig. 6, 20) together to form a pre-commutator unit so that the nails extend radially outward from the periphery of the pre-commutator unit; and
- molding the pre-commutator unit (Abstract) without covering the nail portions (Fig. 2, 42) with a flowing, insulative material to form annular hub (Fig. 2, 24; col. 7, lines 1-7).

The limitations of the claim "...a step of inserting the pre-commutator unit between a pair of dies so that the dies hold the nails without a substantial gap; and a step of charging liquid resinous material into the inside of the dies to mold the pre-commutator unit." are considered to be of an apparatus wherein the process of manufacturing a commutator of a rotary electric machine operates so this manner of operation does not distinguish over the process of Ziegler et al, and Ziegler et al at a minimum suggest the claimed method invention.

**As applied to claim 2,** Ziegler et al teach the bending of the nails (Fig. 2, 42) to stay within the periphery of the pre-commutator unit.

**As applied to claims 3 and 8,** Ziegler et al teach that the first unitary material comprises a plurality of terminal members (Fig. 4, 14 & 42) and a plurality of arc-shaped members of outer periphery (Fig. 4, 74) respectively connecting the terminal members.

As applied to claims 4 and 9, Ziegler et al teach the removing of the arc-shaped members to isolate the terminals (Fig. 2, 42).

As applied to claim 5, Ziegler et al teach that the forming of the first unitary material comprises a step of forming terminal members (Fig. 4, 14) that has the nails (Fig. 4, 72) and a step of forming an intermediate connection member (Fig. 4, 30) to be disposed between the second unitary material (Fig. 6, 20) and the terminal members.

As applied to claim 7, Ziegler et al teach the step of bending the nails (Col. 14, lines 15-20) to stay within the periphery of the pre-commutator unit.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 12, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Strobi (US 5,386,167) in view of Ziegler et al or vice versa.

Strobi teaches a process of manufacturing a planar carbon segment commutator,

comprising:

- a step of forming a first unitary material (Fig. 4, 25) for the commutator segments each of which having a commutator surface and a projection extending in an axis direction away from the commutator surface;
- a step of forming a second unitary material having a plurality of axially projecting contact portions (Fig. 1, 1);
- a step of forming a third unitary material (Fig. 3, 4) having a plurality of flat nails (Fig. 3, 31) extending radially outward;
- a step of fixing the first, second and third unitary materials (Fig. 6, 20) together (Fig. 5, elements 5, 1 & 4) together to form a pre-commutator unit so that the nails extend radially outward from the periphery of the pre-commutator unit.

Ziegler et al teach a process of manufacturing a carbon-segment commutator, comprising:

- a step of forming a first unitary material (Fig. 2, 18) for the commutator segments each of which having a commutator surface and a projection extending in an axis direction away from the commutator surface;
- a step of forming another unitary material (Fig. 4, 14) having a plurality of flat nails (Fig. 4, 42) extending radially outward;
- a step of fixing the first unitary material (Fig. 6, 20) and the other unitary material (Fig. 6, 14) together to form a pre-commutator unit so that the nails extend radially outward from the periphery of the pre-commutator unit; and

- molding the pre-commutator unit (Abstract) without covering the nail portions (Fig. 2, 42) with a flowing, insulative material to form annular hub (Fig. 2, 24; col. 7, lines 1-7).

The limitations of the claim "...a step of inserting the pre-commutator unit between a pair of dies so that the dies hold the nails without a substantial gap; and a step of charging liquid resinous material into the inside of the dies to mold the pre-commutator unit." are considered to be of an apparatus wherein the process of manufacturing a commutator of a rotary electric machine operates so this manner of operation does not distinguish over the process of Ziegler et al, and Ziegler et al at a minimum suggest the claimed method invention.

It would be obvious to one of ordinary skill in the art the time the invention was made to combine the two teachings by applying the insulative molding, as taught by Ziegler et al, to the planar carbon segment of Strobi in order to create a strong, insulative and annular hub.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M - F, 9AM - 5PM.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Phan  
Examiner  
Art Unit 3729

tp  
August 16, 2005



**A. DEXTER TUGBANG**  
**PRIMARY EXAMINER**